GROB'MAN, D. M.

GROB'MAN, D. M. -- "Systems of Ordinary Differential Equations Analogous to Linear Ones." Moscow State U imeni M. V. Lomonosov. Moscow, 1956. (Dissertation for the Degree of Candidate in Physicomathematical Sciences)

SOURCE Knizhnaya Letopis', No 6 1956

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/1 PG - 358
AUTHOR GROBMAN D.M.
TITLE Asymptotic behavior of the solutions of non-linear systems which differ little from linear ones.
PERIODICAL Doklady Akad. Nauk 108, 571-574 (1956)
reviewed 11/1956

The author compares the asymptotic behavior of the solutions of the systems

$$\frac{dx}{dt} = Ax + f(t,x)$$

and

$$\frac{dy}{dt} = Ay.$$

Here A is a constant matrix of n-th order; x,y,f are n-dimensional vectors; f continuous for $t \geqslant t_0$ and $x \in G$; f satisfies the conditions in G

$$f(t,0) = 0, \qquad |f(t,x')-f(t,x'')| \leq g|x'-x''|,$$

where g depends on t or on x' and x" ($|x|$ is the norm of x). Several notions are defined and eight theorems are formulated without proof. Partially these are generalizations and refinements of earlier results of the author (Doklady Akad. Nauk 86, No.1 (1952)) and others (Perron, Math. Z. 15, 121 (1922); Haag, Bull. Sci. Math. 74, 167 (1950)).

GROBMAN D M.

AUTHOR: VINOGRAD R.E., GROBMAN D.M. 42-5-7/17

TITLE: On the Distinction Problems due to Frommer (K problemam razlicheniya Frommera)

PERIODICAL: Uspekhi Mat.Nauk, 1957, Vol.12, Nr.5, pp. 191-196 (USSR)

ABSTRACT: The equation $\frac{dy}{dx} = \frac{P_n(x,y)+p(x,y)}{Q_n(x,y)+q(x,y)}$, where P_n and Q_n are homogeneous polynomials of n-th degree and p,q contain the terms of higher order, in polar coordinates has the form $r\frac{d\varphi}{dr} = \frac{F(\varphi)+f(r,\varphi)}{G(\varphi)+g(r,\varphi)}$. Without restriction of generality one may assume that $F(\varphi) = a_0\varphi^k + a_1\varphi^{k+1} + \ldots$, $k \geqslant 1$, $G(\varphi) = -1 + b_1\varphi + \ldots$. It is known: If $k=2l+1$, $a_0 > 0$, then there exists at least one integral curve which goes into the origin with the tangent $\varphi = 0$. If $k=2l$, then there exists no such integral curve or there exist infinitely many integral curves of this kind. First distinction problem: $k=2l+1$, prove the uniqueness. Second problem: $k=2l$, establish which possibility proves right.

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On the Distinction Problems due to Frommer 42-5-7/17

Theorem: If $f(r,\varphi) = Ar + r\,\psi(r,\varphi)$; $g(0,\varphi) = \psi(0,0) = 0$ and the functions $r\psi$ and rg in $r^2+\varphi^2 \leq x^2$ in r and φ satisfy the Lipschitz condition with a constant which for $x \to 0$ tends to zero, then the following assertions are valid:

1. in the first problem the mentioned integral curve is determined uniquely,
2. in the second problem there exist infinitely many integral curves with the mentioned property.

Four Soviet references are quoted.

SUBMITTED: March 25, 1957
AVAILABLE: Library of Congress

1. Polynomial equations 2. Integral equations

Card 2/2

AUTHOR: Grobman, D.M. (Moscow) SOV/39-46-3-4/5

TITLE: Exponents and Minus-Exponents of Systems of Ordinary Differential Equations (Pokazateli i minus-pokazateli sistem obyknovennykh differentsial'nykh uravneniy)

PERIODICAL: Matematicheskiy sbornik, 1958, Vol 46, Nr 3, pp 343-358 (USSR)

ABSTRACT: Given the system

$$(1) \qquad \frac{dy_i}{dt} = \sum_{k=1}^{n} a_{ik} y_k \qquad (i=1,2,\ldots,n).$$

The minus-exponent of the solution $(y_1, y_2, \ldots, y_n)$ is the number

$$\nu = \overline{\lim_{t \to -\infty}} \left(-\frac{1}{t} \ln \sum_{i=1}^{n} |y_i(t)| \right);$$

it characterizes the "increase" of the solutions for $t \to -\infty$. If for constant a_{ik} the characteristic exponent of a solution equals ω_k, then the minus exponent of the same solution is $\geq -\omega_k$. The same fact is proved for the system

$$\frac{dx_i}{dt} = \sum_{k=1}^{n} a_{ik} x_k + f_i(t, x_1, \ldots, x_n) \qquad (i=1,\ldots,n)$$

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Exponents and Minus-Exponents of Systems of Ordinary Differential Equations

SOV/39-46-3-4/5

It is assumed that the f_i are continuous for all $t \in (-\infty, \infty)$ and $x_1, \ldots, x_n$, that $|f_i| > L(|x_1| + \ldots + |x_n|)$, and that the constant $L(r)$ for all $r = \sum_{k=1}^{n} |x_k|$ is sufficiently small and for $r \to 0$ and $r \to \infty$ tends to zero.
There are 3 references, 2 of which are Soviet, and 1 German.

SUBMITTED: April 23, 1957

Card 2/2

GROBMAN, D.M. (Moskva); SMIRNOV, Yu.I. (Moskva)

Economic distribution of loads over 24-hour period for electric power plants in mixed systems. Izv. AN SSSR. Otd.tekh.nauk. Energ. i avtom. no.4:49-58 Jl-Ag '59. (MIRA 12:11)

1. Institut elektronnykh upravlyayushchikh mashin AN SSSR.
(Electric power plants--Load)

8(5) SOV/20-127-3-18/71

AUTHORS: Grobman, D. M., Smirnov, Yu. I.

TITLE: Economical Load Distribution of a 24 Hours' Diagram for Power Plants of Combined Energy Systems

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 545-548 (USSR)

ABSTRACT: The following problem is discussed in the present paper: In a power system combined of thermal- and hydraulic power plants with a cascade-connected system of hydroelectric power plants the capacities are to be distributed in such a manner that each hydroelectric power plant uses a given quantity of water and the entire fuel consumption of all thermal power plants attains a minimum. The problem is solved by the successive improvement of the practical working methods. The method described makes use of real diagrams and takes the channel motion and loss in the mains into account. The problem is solved in the following manner: The capacity in the individual intervals of time within the entire system P_{system} and at the individual plants P_n^l is assumed to be constant (n denotes the number of plants, l the consecutive number and L the number of periods of time) Δt ($\Delta t = \frac{24 \text{ hours}}{L}$) is

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Economical Load Distribution of a 24 Hours' Diagram for Power Plants of Combined Energy Systems

to be so small that this constancy is warranted. The system is intended to consist of N hydro- and R thermoelectric power plants. The fuel consumption is now, in consideration of all loss parameters of the system, set up as a function of the cooperation of all plants , and for it the minimum is sought: $B = \sum_{r=N+1}^{N+R} \sum_{l=1}^{L} B_r^l(P_{rr}^l)\,\Delta t$. Water consumption and energy consumption (the latter being equal to the load of the system and the loss) give the conditions (1) and (2) for the function B(P). In geometric interpretation this means that in a (N+R)L-dimensional space of the variables P_1^1, P_1^2, P_1^l, P_2^1, P_2^2, ... P_{N+R}^L the function B(P) is to have a minimum supposed to be located on the sectional surface formed by the surfaces from the conditions (1) and (2). On this sectional surface the direction is now sought in which B tends towards zero as quickly as possible. The problem is further solved by successive approximation. In reality this means that, since this way has proved to be possible, the working process

Economical Load Distribution of a 24 Hours' Diagram for Power Plants of Combined Energy Systems

may be improved so long until, under the conditions (1) and (2), the minimum for B is attained in a certain load $P\{P_1 \ldots P^{N+R}\}$. The theme of this report as well as the successive improvement of the function of fuel consumption was suggested by I.S. Bruk, Corresponding Member, AS USSR. The authors thank I.S. Bruk and A.L. Brudno for advice and likewise also V. S. Shakhanov and V. A. Skobelev.

ASSOCIATION: Institut elektronnykh upravlyayushchikh mashin Akademii nauk SSSR (Institute for Electronic Control Machines of the Academy of Sciences, USSR)

PRESENTED: April 1o, 1959, by A. A. Blagonravov, Academician

SUBMITTED: April 1o, 1959

Card 3/3

66152

~~16(1)~~ 12 5422

AUTHOR: Grobman, D.M. SOV/20-128-5-3/67

TITLE: On the Homeomorphism of Systems of Differential Equations

PERIODICAL: Doklady Akademii nauk SSSR,1959,Vol 128,Nr 5,pp 880-881(USSR)

ABSTRACT: The systems (α) $x' = F_1(x)$ and (β) $y' = F_2(x)$, where x,y,F_1,F_2 are n-dimensional vectors, are called homeomorphic in the domains G_1 and G_2, if G_1 can be mapped topologically onto G_2 so that the solution of (α) passes over into the solution of (β) and inversely.
Let A be a constant Jordan matrix of order n. Let in a neighborhood of x=0 the function f(x) satisfy the Lipschitz condition with the constant L; f(0)=0.
Theorem: If in a neighborhood G_1 of x=0 the constant L is sufficiently small, then the systems
(1) $x' = Ax + f(x)$ and (2) $y' = Ay$
are homeomorphic in the domains G_1 and G_2, where G_2 is a certain domain containing y=0.

Card 1/2

66152

SOV/20-128-5-3/67

On the Homeomorphism of Systems of Differential Equations

The author mentions V.V.Nemytskiy, A.M.Mints and E.M. Vaysbord.
There are 3 Soviet references.

PRESENTED: June 9, 1959, by I.G.Petrovskiy, Academician

SUBMITTED: June 2, 1959

Card 2/2

29002

16.8000 (1132, 1329, 1013)

S/020/61/140/004/001/023
C111/C444

AUTHOR: Grobman, D. M.

TITLE: Topological and asymptotic equivalence of systems of differential equations

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 4, 1961, 746 - 747

TEXT: The paper starts from the paper of the author (Ref. 1: DAN, 128, no. 5 (1959)), where the topological (but not the asymptotic) equivalence of the systems

$$\frac{dx}{dt} = Ax + f(x) \qquad (1)$$

and

$$\frac{dy}{dt} = Ay, \qquad (2)$$

was proved, where A is a constant quadratic matrix of n-th order without purely imaginary eigenvalues and f(x) satisfies a Lipschitz condition in the neighborhood of x = 0.
In the present paper the author gives conditions for the asymptotic equivalence. The following notions are used:
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Topological and asymptotic equivalence . S/020/61/140/004/001/025
C111/C444

Characteristic exponent (or simply exponent) of x(t) is

$$\overline{\lim_{t \to +\infty}} \frac{1}{t} \ln|x(t)|.$$

Minus exponent of x(t) is $\overline{\lim_{t \to -\infty}} \frac{1}{t} \ln|x(t)|$

x(t) and y(t) are called analogous for $t \to +\infty$ (for $t \to -\infty$) if the ratio of their norms tend to 1 and the difference of the direction cosines to 0.

$\frac{|x(t) - y(t)|}{|y(t)|}$ is denoted as deviation, where $|x| = (x,x)^{\frac{1}{2}}$ is the norm of x.

Two systems are called homeomorphic in the domains G_1 and G_2, if there is a topological correspondence between G_1 and G_2 such that the trajectories of the first system lying in G_1 pass over into the trajectories of the second system in G_2 and conversely.

Theorem. If:

a) A possesses no eigenvalues with vanishing real part;

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b) $f(0) = 0$;
c) in a certain neighborhood of $x = 0$, $f(x)$ satisfies the condition

$$|f(x') - f(x'')| \leq g(r)|x' - x''|, \tag{3}$$

where $r = \max\{|x'|, |x''|\}$, and for $r > 0$ $g(r) > 0$ there holds

$$g(r) \leq L_0 \frac{r^{\alpha}}{|\ln r|^{(2+\alpha)m+1+\beta+\eta}} \tag{5}$$

where $m+1$ is the order of the maximum box in the Jordan form of A
$L_0 > 0$, $\alpha > 0$, $\beta \geq 0$, $\eta > 0$ are certain constants, then:
1.) (1) and (2) are homeomorphic in certain domains containing the origin of coordinates;
2.) the corresponding O-curves are analogous;
3.) the deviation of the corresponding O^+-curves is

$O(e^{\alpha\omega t} t^{-(m+\beta+\eta)})$ for $t \to +\infty$, where ω is their exponent; for corresponding O-curves the deviation for $t \to -\infty$ is

$O(e^{\alpha\omega|t|} |t|^{-(m+\beta+\eta)})$, where ω is their minus exponent.

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29002
S/020/61/140/004/001/023
Topological and asymptotic equivalence... C111/C444

There are 4 Soviet-bloc and 2 non-Soviet-bloc references. The two references to English-language publication read as follows: J. Haag Bull. Sci. Math., 74, 167 (1950); Ph. Hartman A. Wintner, Am. J. Math., 77, 4, 692 (1955).

ASSOCIATION: Institut elektronnykh upravlyayushchikh mashin Akademii nauk SSSR (Institute of Electronic Control Machines of the Academy of Sciences USSR)

PRESENTED: May 20, 1961 by P. S. Aleksandrov Academician

SUBMITTED: May 16, 1961

4

Card 4/4

GROBMAN, D.M. (Moskva)

Topological classification of the surroundings of a singular point in n-dimensional space. Mat. sbor. 56 no.1:77-94 Ja '62. (MIRA 15:1)

(Topology)

BYLOV, B.F.; GROBMAN, D.M.

Principle of linear inclusion for systems of differential equations. Usp.mat.nauk 17 no.3:159-161 My-Je '62.
(MIRA 15:12)
(Differential equations)

L 18060-63 EWT(d)/FCC(w)/BDS AFFTC/IJP(C)

ACCESSION NR: AP3001446 S/0039/63/061/001/0013/0039

52

AUTHOR: Grobman, D. M. (Moscow)

TITLE: Topological and asymptotic equivalence of systems of differential equations

SOURCE: Matematicheskiy sbornik, v. 61, no. 1, 1963, 13-39

TOPIC TAGS: differential equation, homeomorphism, equivalence system, Lipshits condition

ABSTRACT: The author considers the two systems of differential equations (1) ($dx/dt = Ax + f(x)$) and (2) ($dy/dt = Ay$) where x and y are n-dimensional vectors and A is a constant n by n matrix. He proves the existence of a homeomorphism which guarantees asymptotic equivalence of the corresponding O-curves under certain conditions. Theorem. If:

a) the matrix A has no eigenvalues with zero real parts;
b) $f(0) = 0$;
c) in some neighborhood of the point $x = 0$ the function $f(x)$

satisfies the condition

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$$|f(x')-f(x'')|\leqslant g(r)|x'-x''|^{*}, \qquad (3)$$

where $r=\max(|x'|,|x''|)$, and as $r\to 0$, $g(r)\to 0$,

where for $0<r\leq r_0<1$

$$g(r)\leqslant L_0\frac{r^{\alpha}}{|\ln r|^{(1+\alpha)m+1+\beta+\eta}}, \qquad (4)$$

where m+1 is a number equal to the order of a maximal submatrix in the Jordan form of the matrix A, $L_0\geq 0$, $\alpha\geq 0$, $\beta\geq 0$, $\eta>0$ are constants, then

1) the systems (1) and (2) are homeomorphic in some regions containing the origin;
2) the corresponding O-curves are images of each other;
3) the deviation of the corresponding O^+-curves for $t\to+\infty$

is $O(e^{\alpha\omega t}t^{-(m+\beta+\eta)})$, where $\omega<0$ is their exponent; for the corresponding O^- curves the deviation for $t\to-\infty$ is $O(e^{\alpha\omega|t|}|t|^{-(m+\beta+\eta)})$ where $\omega<0$ is their

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ACCESSION NR: AP3001446

minus exponent. Under the conditions of the theorem, but with $g(r) \leq L_0 r^{\alpha_0}$, $L_0 \geq 0$, $\alpha_0 > 0$ instead of (4), assertions 1) and 2) of the theorem hold and the deviation of the corresponding 0-curves is $o(e^{\omega|t|})$, for $|t| \to \infty$, where ω is their exponent in the case of 0^+-curves and the minus exponent in the case of 0^--curves, while $\varkappa$ is any positive number less than α_0. Here the exponent of $x(t)$ is defined as

$$\overline{\lim_{t \to +\infty}} \frac{1}{t} \ln |x(t)|,$$

and the minus exponent of $x(t)$ as

$$\overline{\lim_{t \to -\infty}} \frac{1}{-t} \ln |x(t)|.$$

Orig. art. has: 112 formulas.

ASSOCIATION: none

SUBMITTED: 23May61 DATE ACQ: 05Jun63 ENCL: 00

SUB CODE: MM NO REF SOV: 009 OTHER: 003

Card 3/3

L 36311-65 EWT(d) Pg-4 IFP(c)
ACCESSION NR: AP4047313 S/0020/64/158/004/0774/0776

AUTHORS: Grobman, D.M.

TITLE: The asymptotes of the solutions of near-linear systems of differential equations

SOURCE: AN SSSR. Doklady*, v. 158, no. 4, 1964, 774-776

TOPIC TAGS: near linear system, differential equation, asymptotic estimate

ABSTRACT: Without proof, the author states 2 theorems that refine and generalize previous results on problems of asymptotic equivalence of the solutions for the system

$$x' = Ax + F(t, x); \quad (1)$$
$$y' = Ay. \quad (2)$$

Here A is an n x n matrix with constant coefficients, x, y, and F(t, x) are n-dimensional vectors, F(t, x) is defined for $t \geq t_0$ and any x,

Card 1/4 3

$$F(t,\ 0) = 0; \tag{3}$$

$$|F(t,\ x_1) - F(t,\ x_2)| \leqslant g(t)|x_1 - x_2|. \tag{4}$$

where g(t) is a non-negative function. The fraction $|x(t) - y(t)|/|y(t)|$ which is called the deviation, can be taken as a measure of the closeness of the vectors x(t) and y(t). If the deviation of x and y approaches 0 as $t \to \infty$, the vectors x(t) and y(t) are said to be analogous. Theorem 1: Let α and β be arbitrary real numbers, where $\alpha > 0$, and let

$$\int_{t_0}^{\infty} e^{\alpha\tau}\tau^{\beta} g(\tau)\, d\tau < +\infty.$$

Then there exists a topological mapping Φ of the space (x) onto the space (y) with the following properties: a) Φ and Φ^{-1} satisfy the Lipshitz condition, b) the solutions of system (1) and (2) that pass through the points that correspond under the mapping Φ at time $t = t^*$, where t^* is sufficiently large are analogous and have

deviation $o(e^{-\alpha t} t^{m_k^0 - \beta})$.

Theorem 2: Assume that for some non-negative number

$$\int_{t_0}^{\infty} \tau^{\beta} g(\tau)\, d\tau < +\infty. \qquad (5)$$

then there exists a homomorphism Φ that maps the space (x) onto the space (y) and has the following properties: a) Φ and Φ^{-1} satisfy the Lipshitz condition, b) the solutions of systems (1) and (2) that, when $t = t^*$, where t^* is sufficiently large, pass through points corresponding under Φ have the same exponents, c) for any index k for which $\beta \geq m_k$, the solutions of systems (1) and (2) that have exponents ω_k and pass, at the initial instant, through points corresponding under Φ are analogous and their deviation is $o(t^{m_k - \beta})$ for $t \to \infty$. Two examples are given. Orig. art. has: 9 equations.

ASSOCIATION: Institut elektronnykh upravlyayushchikh mashin (Institute of Electronic Computers)

GROBMAN, D.M.

Analogy of systems of differential equations near a singular point. Dokl. AN SSSR 106 no.1:19-19 Ja '56.

(MLA 19:1)

1. Submitted May 7, 1955.

ACC NR: AM6035815 Monograph UR/

Bylov, Boris Fedorovich; Vinograd, Robert El'yukomovich; Grobman, David Matveyevich; Nemytskiy, Victor Vladimirovich

Lyapunov's theory of exponents and its application to problems of stability (Teoriya pokazateley Lyapunova i yeye prilozheniya k voprosam ustoychivosti) Moscow. Izd-vo "Nauka", 1966. 576 p. biblio., index. 8000 copies printed.

TOPIC TAGS: mathematic method, mathematics, mathematic transformation

PURPOSE AND COVERAGE: This book is intended for students, fellows in mathematics departments, and mathematicians. It is concerned with a study of the qualitative behavior of a differential equation system. New findings relative to the stability of the equilibrium state and the asymptotic behavior of solutions are included, as well as the conditions which assure the stability of these characteristics. The book's contents can be considered a development of Lyapunov's ideas. There are 131 references, 92 of which are Soviet.

TABLE OF CONTENTS (Abridged)

Card 1/2 UDC: 517.91

ACC NR: AM6035815

SUB CODE: 12/ SUBM DATE: 09Jun66/ ORIG REF: 091/ OTH REF: 039/

Card 2/2

GROBMAN, L., inzhener.

Building tiles from wood chips. Prom.koop. no.8:16-17 Ag '56.
(Tiles) (MLRA 9:10)

GROBMAN, L.

Model plan of a shop for invalids. Prom. koop. 12 no.3:18 Mr '58.
(MIRA 11:3)

1. Glavnyy inzhener proyekta instituta "TSentropromproyekt".
(Tuberculosis) (Vocational rehabilitation)

GROBMAN, L., inzh.

Standard design of a workshop for the handicapped. Prom.koop. 13 no.3:25 Mr '59. (MIRA 12:4)
(Vocational rehabilitation)

GROSMAN, M.M.; GRINBERG, A.A.

Case of patent ductus arteriosus and aplasia of the left kidney.
Vrach.delo no.2:191 F '57. (MLRA 10:6)

1. Klinika fakul'tetskoy terapii (zav. - prof. N.B.Shchupak)
Chernovitskogo meditsinskogo instituta.
(KIDNEYS--ABNORMITIES AND DEFORMITIES)
(DUCHUS ARTERIOSUS--ABNORMITIES AND DEFORMITIES)

GROBMAN, M.M.

Polysaccharides in patients with infectious hepatitis. Vrach. delo no.9:983 S'58 (MIRA 11:10)

1. Kafedra fakul'tetskoy terapii (zav. - prof. N.B. Shchupak) Chernovitskogo meditsinskogo instituta.
(HEPATITIS, INFECTIOUS)
(BLOOD SUGAR)

GROBMAN, M.M.

Some biochemical indexes of oxidation-reduction processes in patients with Botkin's disease. Vrach.delo no.5:529 My '60. (MIRA 13:11)

1. Kafedra fakul'tetskoy terapii (zav. - prof. N.B.Shchupak) Chernovitskogo meditsinskogo instituta.
(HEPATITIS, INFECTICUS)
(OXIDATION, PHYSIOLOGICAL)

GOL'DMAN, A.L., inzhener; CHERNOBROVKINA, Ye.S., inzhener; GROBMAN, R.M.

Cold rolled transformer steel. Stal' 7 no.3:231-235 '47.
(MLRA 9:1)

1.Verkh-Isetskiy metallurgicheskiy zavod.
(Sheet steel) (Rolling (Metalwork))

(Grossman S.M.)

UVAROV, S.F., glavnyy red.; POPOV, A.S., red.; D'YAKONENKO, V.M., red.; GROSSMAN, S.M., red.; PETROVA, T.G., red.; KOLESNIKOV, F.M., red.; KRUTOUS, V.P., tekhn.red.

[Papers at a technical conference on design, construction, manufacture, and use of reinforced concrete poles for electric transmission lines and telephone communications, November 27-30, 1956] Materialy nauchno-tekhnicheskoy konferentsii po proektirovaniiu, stroitel'stvu, proizvodstvu i ekspluatatsii zhelezobetonnykh opor liniy elektroperedachi i svyazi. [Groznyi] Checheno-Ingushskoe knizhnoe izd-vo, 1957. 163 p. (MIRA 11:6)

1. Nauchno-tekhnicheskaya konferentsiya po proyektirovaniyu, stroitel'stvu, proizvodstvu i ekspluatatsii zhelezobetonnykh opor linii elektroperedachi i svyazi, Groznyy, 1956.
(Reinforced concrete construction) (Electric lines--Poles)

GROBMAN, Ya

KIRKHENSHTEYN, A., akademik, Geroy Sotsialisticheskogo Truda; KAL'NIN'SH, A. [Kalniņš A.], akademik; STRADIN'SH, P. [Stradiņš, P.], akademik; SUDRABKALN, Yan [Sudrabkalns, Jānis], narodnyy poet Latviyskoy SSR MELBARDIS, K., khudozhnik; LAPIN'SH, A. [Lapiņš, A.], narodnyy khudozhnik Latviyskoy SSR; YUROVSKIY, Yu., narodnyy artist SSSR; AVOTS, A., fotolyubitel'; VARDAUNIS, E., khudozhnik, zasluzhennyy deyatel' iskusstv Latviyskoy SSR; GAYLIS, V., kinooperator; RIDZENIYEKS, V., fotograf; KALNYN'SH, E. [Kalniņš, E.]; LOGANSON, R. [Iohanson, R.], stareyshiy master khudozhestvennoy fotografii; RIEKSTS, Ya. [Rieksts, J.], fotograf; LERKH, Yu.; FEDOSEYEV, B., fotograf; REYKHMAN, E., zasluzhennyy deyatel' kul'tury Latviyskoy SSR; GROBMAN, Ya. [Grobman, J.], fotograf; OZOLS, Ya. [Ozols, J.], fotograf; TIKNUS, B., fotograf; FADEYEV, Ye., fotograf; RAKE, I., fotograf; BERZTIS, A., fotograf; RAKE, K., fotograf; UPIT, V., fotograf; SHADKHAN, M., fotolyubitel'; RITERS, G., fotolyubitel'.

Organize a society of Soviet photographers! Sov.foto 18 no.4:77 Ap '58. (MIRA 11:6)

1.Rizhskaya kinostudiya (for Gaylis, Fedoseyev).3.AN Latviyskoy SSR (for Ridzenieks). 4.Chlen-korrespondent Akademii khudozhestv SSSR (for Kal'nynsh, E). 5.Zhurnal "Rigas foto" (for Rieksts, Gorman, Ozols). 6.Latviyskoye teatral'noye obshchestvo (for Lerkh). 7.Direktor Doma narodnogo tvorchestva imeni E. Melngaylisa (for Reykhman). 8.Predsedatel' Tvorcheskogo soveta (for Grobman). 9.Chlen Tvorcheskogo soveta (for Ozols). 10.Gazeta "TSinya" (for Tiknus). 11.Fotokhronika Latviyskogo telegrafnogo agentstva (for Fadeyev). 12.Institut Latgiproprom (for Rake, I.).

(Photography--Societies)

SOV/79-30-2-52/78

AUTHORS: Yakubovich, A., Grobman, Ye.

TITLE: Synthesis of Vinyl Monomers. VIII. Alkenyl Esters of Trimesic Acid

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 607-608 (USSR)

ABSTRACT: The article describes synthesis of triallyl trimesate and trivinyl trimesate. Triallyl trimesate (b.p. 210-212 ° C at 2 mm, n_D^{20} = 1.5230) was synthesized by the authors by treating trimesyl chloride with allyl alcohol. Treatment of trimesyl chloride with chlormercuriacetaldehyde gave trivinyl trimesate which was not previously described in the literature. While the triallyl ester is a liquid, the trivinyl ester is a crystalline solid (no m.p. given). There are 6 references, 4 German, 1 Soviet, and 1 U.K. The U.K. reference is: Brit. Patent 754537 (1956).

SUBMITTED: December 29, 1958

Card 1/1

GRUBMAN, YZ. M

PHASE I BOOK EXPLOITATION SOV/4984

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; doklady i avtoreferaty. Sektsiya III. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries) Section III. [Moscow, Izd-vo AN SSSR, 1960] 469 p. 55,000 copies printed.

Tech. Ed.: P. S. Kashina.

Sponsoring Agency: The International Union of Pure and Applied Chemistry. Commission on Macromolecular Chemistry.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high molecular compounds.

COVERAGE: This is Section III of a multivolume work containing papers on macromolecular chemistry. The articles in general deal with the kinetics of polymerization reactions, the synthesis of special-purpose polymers, e.g., ion exchange resins, semiconductor materials, etc., methods of catalyzing polymerization reactions, properties and chemical interactions of high molecular materials, and the effects of various factors on polymerization and the degradation of high molecular compounds. No personalities are mentioned. References given follow the articles.

40

Grobner, P.

C Z E C H

Entropy determination of solid compounds. P. Gröbner (Výzkumný ústav ochrany materiálu, Prague). *Listy* 8, 84-6(1953).—Entropies estd. by the method of Latimer (*C.A.* 45, 6891d) are compared with entropies in Brick's tables. The difference is from 0.2 to 13.8.
Frank J. Hendel

GRÖBNER, PAVEL

A Diagram of free energy of carbides versus temperature. Pavel Gröbner, *Hutnické Listy* 9, 372-4(1954)(English summary). Gr plotted a diagram of free energy of Al_4C_3, CaC_2, Co_3C, Cr_4C, Cr_3C_2, Fe_3C, Mo_2C, Mn_3C, SiC, TaC, TiC, VC, WC, W_2C, and ZrC *vs.* temp. for 298–2000°K. Data were taken from different sources. R. J. H.

GRÖBNER, PAVEL

CZECH

Diffusion coefficient of aluminum in iron in the solid-solution range. Pavel Gröbner. *Hutnické Listy* 10, 200–3 (1955).—On basis of experiments with Al diffusion in Fe an equation was calcd. for diffusion coeff. (D) in the range of Al solid soln. in Fe for the temp. range 950–1100° as follows: $D = 2.0 \times 10^6 \exp. (-56000/RT)$ sq. cm./day.

Petr Schneider

V 1268* Life of Aluminized and Alited Steels Under High Temperatures. Životnost alumetovaných a alitovaných součástí za vysokých teplot. (Czech.) Pavel Grohner. *Hutnické listy*, v. 10, no. 10, Oct. 1955, p. 600-606.

H6 Prolongation of the life of aluminized steels at high temperatures can be obtained by certain alloys in the steel. Carbon retards the diffusion of Al into the steel. Graphs, tables. 12 ref.

GROBNER, P.

Distr: 4E2c(m)

Carbide precipitation in corrosion-resistant titanium-stabilized steels type 18-8. V. Čihal and P. Gröbner. *Problems and Perspectives Czechoslov. Met. and Foundry* 1956, 104-15.—The kinetics of carbide pptns. are evaluated in regard to a study of intercryst. corrosion. High homogenization temps. partially destroy the TiC and pptn. takes place between 550 and 850°. TiC ppts. at higher temps. Intercryst. corrosion appears in the presence of $Cr_{23}C_6$, apparently owing to the higher diffusion rate of Cr at 750° compared with Ti. Isolated carbides were examd. with x-rays, confirming the theory. From *J. Iron Steel Inst.* 187, 377(1957).

5
2-MJC(JD)(RJ)
1

GRÖBNER, P.

The Formation of Scale. P. Gröbner. (*Hutník*, 1956, 6, (12), 364–366). [In Czech]. The structure and kinetics of formation of scale on iron and steel are discussed.—P. P.

GROBNER, P.; BRET, Z.

GROBNER, P.; BRET, Z. Oxidation of steels in superheated steam. p. 125.

Vol. 12, no. 2, Feb. 1957
HUTNICKE LISTY
TECHNOLOGY
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

Z/508/60/000/000/008/018
E112/E120

AUTHORS: Eckstein J., and Gröbner P.

TITLE: Contribution to the technology of single crystal growing

SOURCE: III. Konference o monokrystalech. Prague, Výzkumný ústav pro minerály, 1960. 109-123

TEXT: Practical problems in the growing of single crystals of alkali-metal halides by the Kyropoulos withdrawal technique are discussed. At the very high temperatures of fusion there is some volatilization of the alkali metal halide which diffuses through the refractory wall of the furnace and may lead to corrosion of the embedded heating elements. An improved unit is described which provides a better refractory material, a more accurate temperature control and a special corrosion-resistant lining for the furnace wall (subject matter of Czechoslovak Patent Application B 538/MPSt 8-56). The refractory material consists of a mixture of white, synthetic corundum and clay, fired at 600-700 °C for 8 hours. Its porosity is reduced by soaking in a solution of AlF_3, followed by treatment with NH_4OH. A precipitate of aluminium hydroxide gel

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Contribution to the technology ... Z/508/60/000/000/008/018
E112/E120

is deposited within the pores of the refractory material. The improved temperature control is provided by a platinum resistance thermometer, wound upon a corundum former and housed in a silica sheath. To reduce heat losses, the walls of the furnace must be as thin as possible. Their stability and durability is ensured by a special corrosion-resistant liner, made from aluminized iron plate. Best anti-corrosion effects were obtained with an Fe-Al alloy in which the Al content was not less than 12%. The aluminized layer was provided with a multiple protective coating of sodium silicate or ethylsilicate. These protective layers were then fused at 650 and 900 °C. The chemical reactions, upon which the protective action of aluminium against the vapors of the alkali-metal halides is based, are discussed. There are 14 figures.
ASSOCIATION: Výzkumný ústav pro minerály, Turnov (Research Institute for Minerals, Turnov) (J.Eckstein); Výzkumný ústav ochrany materiálu, Praha (Research Institute for Protective Coatings, Prague) (P.Gróbner)

Card 2/2

Z/034/60/000/07/004/029
E073/E535

18.1130

AUTHORS: Čihal, Vladimír, Engineer, Candidate of Technical Sciences, Gröbner, Pavel, Ježek, Jaroslav, Doctor of Natural Sciences, Pospisil, Rudolf, Doctor Engineer

TITLE: On the Problem of Intercrystallite Corrosion of Austenitic, Cr-Ni Steels Containing 24% Cr and 19% Ni

PERIODICAL: Hutnické listy, 1960, No 7, pp 518-524

ABSTRACT: This paper is intended to commemorate the 60th birthday of Professor Doctor of Technical Sciences Engineer Josef Teindl, Mining University, Ostrava. Intercrystallite corrosion on austenitic stainless steels is attributed by some authors to the impoverishment of the grains in chromium due to the segregation of carbides at the grain boundaries, others attribute this property to internal stresses caused by the segregated carbides. It is argued in favour of the latter view that intercrystallite corrosion occurs also in steels containing over 20% Cr in which the chromium content of the grain surface layer cannot decrease sufficiently, to be below 12%. The aim of the work

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On the Problem of Intercrystallite Corrosion of Austenitic, Cr-Ni Steels Containing 24% Cr and 19% Ni

described in this paper was to investigate the validity of this argument and to contribute to the elucidation of the problem of intercrystallite corrosion of the austenitic steel 1Cr24Ni19 (0.09% C, 0.4% Mn, 1.5% Si, 23.2% Cr, 18.7% Ni). The higher chromium content can not only prevent a reduction of the chromium content during segregation of carbides at the grain boundaries below the passivation level but, from the theoretical point of view, it should also increase the resistance of the carbides $Cr_{23}C_6$ against dissolution in austenite and thereby reduce the relative quantity of carbon in the solid solution at low austenization temperatures. The steel used in the experiments was produced in a high frequency basic furnace, cast into small ingots from which strips of 25 x 6 mm were forged after machining. On such specimens the tendency to develop intercrystallite corrosion and to separate out chromium carbides in the

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structure after precipitation annealing was investigated. The conditions of heat treatment of the individual specimens are given in Tables 5 and 6, which also contain data on the intensity of intercrystallite corrosion. In these tables "-" denotes no intercrystallite corrosion, "(+)" denotes very slight intercrystallite corrosion, "+" to "+++" means increasing intercrystallite corrosion. The specimens were first austenitized at 1100°C. Following that, they were precipitation annealed in the temperature range 500 to 850°C. To enable comparison of the influence of the austenization temperature, the remaining specimens were additionally annealed at temperatures between 950 and 1250°C with temperature steps increasing by 50°C. A number of photographs (16) are reproduced which were obtained by means of an electron microscope. The obtained results indicate that in spite of the high

Card 3/5 average chromium content, the chromium content in the

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On the Problem of Intercrystallite Corrosion of Austenitic, Cr-Ni Steels Containing 24% Cr and 19% Ni

grain boundaries may drop below the passivation level in the surface layer as a result of rejection of chromium carbides, which provides a basis for intercrystallite corrosion of this steel. This disproves the theory of intercrystallite corrosion being due to internal stresses, not only for the here investigated steel but also for the steel 1Cr18Ni9Ti(Nb), for which it was proved earlier (Refs 1 and 2) that artificially generated segregates at the grain boundaries are chromium carbides $Cr_{23}C_6$ and not titanium or niobium carbides. J. Philibert and H. Bizouard (Ref 15) have established directly by means of X-ray spectral analysis a drop in the chromium content of austenite during rejection of chromium carbides in stainless steels. They used a micro-analyser with an electron probe (Ref 16) which permits making an accurate quantitative analysis and a local identification of the structural lattice

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within a volume of 1 cubic micron. Such local analysis proved unequivocally the fact that the grain boundaries of stainless steel are impoverished in chromium in the neighbourhood of rejected carbides. This study was carried out at the State Research Institute for the Protection of Materials, G. V. Akimov, Prague, jointly with the United Steel Works in Kladno and the State Research Institute for Materials and Technology, Prague. There are 6 figures, 6 tables and 17 references, 6 of which are Czech, 1 Soviet, 2 German, 2 French and 6 English.

ASSOCIATIONS: SVÚOM, Prague (Čihal), Modřanské strojirny (Modřany Engineering Works) (Gröbner), SVÚMT, Prague (Ježek) and SONP Kladno (Pospíšil)

SUBMITTED: February 24, 1960

Card 5/5

GRABNER, P

Z/6284

PHASE I BOOK EXPLOITATION

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines [collection of articles]). Prague, Nakl. ČAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Končický.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components, burning of fuel in combustion chambers, axial compressors, and characteristics of turbines manufactured in Czechoslovakia.

Z/6284

Basic Problems in the Construction (Cont.)

Card 5/8 7/2

CIHAL, Vladimir, doc. inz. CSc.; GROBNER, Pavel, inz. CSc.

Corrosion inhibition by melted eutectic Pb-Bi. Stor
VSB Ostrava 9 no.3:439-451 '63.

L 62743-65 EWA(d)/EWP(t)/EWP(z)/EWP(b) JD/JW
ACCESSION NR: AP5021407 CZ/0034/64/000/012/0870/0874

AUTHOR: Lobl, Karel; Tuma, Hanus; Grobner, Pavel

TITLE: Contribution to the kinetics of segregation of carbides in austenitic steels of the type 18 Cr, 9 Ni, Ti

SOURCE: Hutnicke listy, no. 12, 1964, 870-874

TOPIC TAGS: crystallization, carbide, electrochemical analysis, alloy steel, high alloy steel, austenitic steel

Abstract [Authors' English summary]: Kinetics of the crystallization of carbides was investigated by the method of electrochemical isolation and chemical analysis of the isolated portion of samples isothermally annealed at 400-1000°C for 60-10,000 hours. Segragation of Ti carbides proceeds, according to temporatures, through nucleation, diffusion growth, and increased solubility. The amount of Ti(C,N) eliminated is constant; the activation energy of this separation is a function of the amount of Ni in

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the steel (4-8 kcal/mol at 0.21% to 8-15 at 0.61% Ti). Decrease of the amount of Ti, Cr, Fe in carbides occurs at 400-650°C at quick isothermal annealing. This follows an unstable phase formed at 1100°; even in a high alloy steel with excess of Ti, this separation occured at 400-650° during long term annealing. The cause of it is probably the fact that up to 650-750° Cr diffusion coeffi-cient in austenitic steels is higher than that of Ti.

Orig. art. has: 12 graphs, 1 table.

ASSOCIATION: SVUMT, Prague 55

SUBMITTED: 00	ENCL: 00	SUB CODE: MM, GC
NR REF SOV: 001	OTHER: 004	JPRS

Card 2/2

GEORNEV, I. I. & YEFIMO., I. E.

"Wires and Communications Cables with Polychlorvinyl Insulation," Moscow 1950, 1 copy.

SURNAME (in caps); Given Names

Country: Rumania

Academic Degrees:

Affiliation: -not given-

Source: Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol VI, No 5, Sep-Oct 1961, pp 409-410.

Data: "Detection of the Influenza Virus in the Chorio-Allantoic Membrane of the Embryonated Hen's Egg by the Method of Fluorescent Antibodies."

Authors:

BALS, M., -Prof.-
NAFTA, I., -Dr.-
ZILISTEANU, Eugenia, -Dr.-
GROBNICU, Mina, -Dr.-

NAFTA, I.; ZILISTEANU, Eugenia; NICULESCU, I.; GROBNICU, Mina

Comparative investigations of the immunization of chickens to obtain influenza antiserums. Stud. cercet. inframicrobiol. 13 no.4:455-461 '62.

(INFLUENZA) (IMMUNE SERUMS) (POULTRY)

NAFTA, I.; ZILISTEANU, Eugenia; NICOLESCO, I. Th.; GROBNICO, Mina; CRETESCO, Ligia; POPESCO, Ana; SATMARI, C.; Collaborateur technique: GHENESCO, Ecaterina

Virological and serological investigations made during the influenza epidemic of February-March 1962. Arch. Roum. path. exp. microbiol. 22 no.1:13-27 Mr '63.

1. Travail de l'Institut "Dr. I. Cantacuzino" - Service de la Grippe.

(INFLUENZA) (EPIDEMIOLOGY)
(INFLUENZA VIRUSES)
(HEMAGGLUTINATION INHIBITION TESTS)

MAGUREANU, E., conf.; GROBNICU, Mina, ir.; MUSETESCU, I., ir.; [illegible], I., dr.

Serological diagnosis of adenovirus diseases with Boyden's passive hemagglutination reaction. Microbiologia (Bucur) 9 no.2:161-168 Mr-Ap '64.

1. Lucrare efectuata in Institutul de microbiologie, parazitologie si epidemiologie "Dr. I. Cantacuzino" (director: prof. I. Mesrobeanu). 2. Laboratorul de adenoviroze (for Magureanu, Grobnicu, Musetescu). 3. Laboratorul de serologie (for Radu).

[redacted]

MAGUREANU, E. conf.; GROBNICU, Mina, dr.; MUSETESCU, M., dr.

Complement fixation test in adenovirus infections performed on plastic slide. with wells. Microbiologia (Bucur) 9 no.5: 461-463 S-O '64

1. Lucrare efectuata in Institutul de microbiologie, parazitologie si epidemiologie "Dr. I. Cantacuzino", Bucuresti.

[redacted]

MAGUREANU, E.; GROBNICO, Mina; MIHETESCO, M.; BONA, C.

Use of the immunofluorescence technic in the study of the localization and multiplication of Adenovirus in cell cultures. Arch. Roum. path. exp. microbiol. 23 no.4:1011-1016 D '64.

1. Travail de l'Institut "Dr. I. Cantacuzino", laboratoire des Adeno-virus. Submitted June 8, 1964.

MAGUREANU, E., conf.; MUSETESCU, M., dr.; GROZICU, Mina, dr.

Adenoviral infections. Microbiologia (Bucur) 10 no.1:1-9 Ja-F'65.

1. Lucrare efectuata in Institutul de microbiologie, parazitologie si epidemiologie "Dr. I. Cantacuzino", Bucuresti .

MAGUREANU, E., conf.; GROBNICU, Mina, dr.; MUSETESCU, M., dr.

Respiratory syncytial virus. Microbiologia (Bucur.) 10 no.4: 311-317 Jl-Ag '65.

1. Lucrare efectuata in laboratorul de viroze respiratorii al Institutului "Dr. I. Cantacuzino", Bucuresti.

PA 32/49T29

GROBOKOPATEL, S. B.

Jun 48

USSR/Engineering
Power Plants - Installation
Power Plants - Design

"Some Problems in Organizing the Building Area of Heat and Power Stations," S. B. Grobokopatel', Engr, 6 pp

"Elek Stants" Vol XIX, No 6

Treats under: organization of work on the main framework, temporary constructional installations, and deciding on general constructional plan. Includes three diagrams.

32/49T29

GROBOKOPATKO, S.B., inzhener; OSOVIK, B.A., inzhener; ELINZON, M.P., kandidat tekhnicheskikh nauk; POPOV, L.N., kandidat tekhnicheskikh nauk.

Producing porous aggregates for lightweight concretes. Gor.khoz. Mosk. 30 no.4:21-24 Ap '56. (MLRA 9:8)
(Lightweight concrete)

GROBOV, A. G.

On the Question of the Vectors of Crimean Hemorrhagic Fever.

Medical Parasitology, USSR, 15, 1946, 6, 59-63

GROBOV, A. G.

"The Problem of the Investigation of New Insecticides for the Control of Sandflies (Phlebotomus papafasii)", Med. Paraz. i Paraz. Bolez., Vol. 17, No. 5, pp 448-54, 1948.

GROBOV, A.G., podpolkovnik administrativnoy sluzhby; IGNATOVICH, V.O., kapitan meditsinskoy sluzhby; VEKLENKO, Yu.T., glavnyy starshina.

Using the boiler of an automatic shower installation for making DDT and benzene hexachloride emulsions. Voen-med. zhur. no.1:89-90 Ja '56 (MLRA 10:5)
(DDT(INSECTICIDE)) (BENZENE HEXACHLORIDE)

Grobov, A.G.

GROBOV, A.G.

Eight years' experience in controlling moth flies along the Black Sea coast. Med.parazi.i parazi.bol.supplement to no.1:45-46 '57. (MIRA 11:1)

1. Iz meditsinskoy sluzhby Chernomorskogo flota.
(BLACK SEA REGION--MOTH FLIES)

GROBOV, A.G.

Species and ecology of Ixodes of the Heraclean Peninsula and their epidemiological significance [with summary in English]. Med.paras. i paraz.bolezn. 23 no.1:32-37 Ja-F '59. (MIRA 12:3)
(TICKS,
Ixodes, species & ecol. in Crimea (Rus))

GROSOV, A. G., Cand Biol Sci --"Observations of mosquitoes in Sevastopol' during the period of ~~elimination~~ eradication of the focal centers of paludal fever and in the ~~following~~ subsequent years." Kiev, 1960 (Acad Sci UkSSR. Inst of Zoology). (KL, 1-61, 187)

1. RAZUVAYEV, G. A., OL'DEKOP, YU. A., GROBOV, L. N.

2. USSR (600)

4. Mercury Organic Compounds

7. New method for the synthesis of mercury organic compounds. Dokl AN SSSR No 1 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

GROEOV, L. N.

Chemical Abstracts
May 25, 1954
Organic Chemistry

(3)

Reaction of acyl peroxides with metallic mercury. G. A. Razuvaev, Yu. A. Ol'dekop, and L. N. Grobov. *Zhur. Obshchei Khim.* 23, 580-93(1953).—Identification of alkyl radicals in the liquid phase was accomplished by fixation of Hg. In the thermal decompn. of Ac_2O_2 in C_6H_6 in the presence of metallic Hg there was obtained 64.7% MeHgOAc. A similar reaction with Bz_2O_2 gave 31.5% PhHgOBz. Thermal decompn. of Ac_2O_2 in CCl_4 in the presence of Hg gave HgCl and HgOAc, along with products of chlorination of Hg by CCl_4 initiated by the peroxide; C_2Cl_6 was the org. product isolated. Bz_2O_2 under these conditions gave HgOBz. G. M. Kosolapoff

GROBOV, L. N.

3

USSR

Reaction of acyl peroxides with metallic mercury. G. A. Razuvaev, Yu. A. Oldekop, and L. N. Grobov. *J. Gen. Chem. U.S.S.R.* 23, 613-16(1953)(Engl. Translation).—See *C.A.* 48, 5704i. H. L. H.

RAZUVAYEV, G.A.; OL'DEKOP, Yu.A.; GROBOV, L.N.

New method of synthesis of organomercury compounds. Doklady Akad. Nauk S.S.S.R. 88, 77-8 '53. (MLRA 6:1)
(CA 48 no.1:142 '54)

1. Gorki State Univ.

5(3) SOV/80-32-4-30/47

AUTHORS: Etlis, V.S. and Grebov, L.N.

TITLE: Hypochlorination of Propylene (Gipokhlorirovaniye propilena)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol. 32, Nr 4, pp 874-877 (USSR)

ABSTRACT: A number of important products can be obtained with the use of propylene oxide which, in turn, can be produced by the dehydrochlorination of propylene chlorohydrin. The latter can be obtained by hypochlorination of propylene, the process of which is the subject of the present article. The authors studied this process on a bubble-type column of continuous operation, 2 m high and 40 mm in diameter, shown in Figure 1. The run of this reaction was investigated under different conditions, and the yield of propylene chlorohydrin was measured in dependence on various factors, such as the molar ratio of the agents, speed of chlorine inlet, etc., and the results are shown in tables. The authors noted that the production of propylene chlorohydrin in concentrated form is rather easy by using the process of hypochlorination of propylene. As a

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Hypochlorination of Propylene

by-product of this process, the formation of chloroacetone was discovered, which resulted from the oxidation of propylene chlorohydrin.
There are: 1 diagram, 1 table and 4 references, 2 of which are Soviet, 1 English and 1 French.

SUBMITTED: September 7, 1957

Card 2/2

RAZUVAYEV, G.A.; ETLIS, V.S.; GROBOV, L.N.

Preparation of cyclic alkenethiocarbonates. Zhur.VKHO 6 no.5:588-589 '61. (MIRA 14:10)

(Carbonic acid)

RAZUVAYEV, G.A.; ETLIS, V.S.; GROBOV, L.N.

Interaction between sulfurous anhydride and certain alkylene oxides. Zhur. ob. khim. 31 no.4:1328-1332 Ap '61. (MIRA 14:4)
(Sulfur dioxide)
(Olefins)

RAZUVAYEV, G.A.; ETLIS, V.S.; GROBOV, L.N.

Degradation of some low molecualr weight polysulfites. Zhur. ob. khim. 31 no.4:1332-1334 Ap '61. (MIRA 14:4)
(Sulfites)

ETLIS, V.S.; GROBOV, L.N.; RAZUVAYEV, G.A.

Interaction of carbon sulfide with ethylene oxide. Dokl. AN SSSR 140 no.3:623-625 S '61. (MIRA 14:9)

1. Chlen-korrespondent AN SSSR (for Razuvayev).
(Carbon sulfide) (Ethylene oxide)

RAZUVAYEV, G.A.; ETLIS, V.S.; GROBOV, L.N.

Interaction of some alkene oxides with carbon oxysulfide.
Zhur.ob.khim. 32 no.3:994-996 Mr '62. (MIRA 15:3)
(Ethers) (Carbonyl sulfide)

ETLIS, V.S.; GROBOV, L.N.; RAZUVAYEV, G.A.

Interaction of some alkene oxides with carbonyl sulfide. Part 2.
Zhur.ob.khim. 32 no.9:2940-2942 S '62. (MIRA 15:9)
(Ethers) (Carbonyl sulfide)

RAZUVAYEV, G.A.; ETLIS, V.S.; GROBOV, L.N.

Reaction of some oxides and thiooxides of alkenes with hydrogen sulfide. Zhur.ob.khim. 33 no.4:1366-1369 Ap '63. (MIRA 16:5)
(Olefins) (Oxides) (Hydrogen sulfide)

L 23021-66 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6007659 (A) SOURCE CODE: UR/0413/66/000/003/0022/0022

AUTHOR: Likhterov, V. R.; Etlis, V. S.; Tkachenko, Yu. I.; Grobov, L. N.

ORG: none

TITLE: Method of preparing vinyl chloride. Class 12, No.178368

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 22

TOPIC TAGS: vinyl chloride, chlorination, ethylene

ABSTRACT: An Author Certificate has been issued for a method of preparing vinyl chloride by high-temperature chlorination of ethylene. To simplify the procedure, the chlorination is carried out with water vapor. The molar ratio for ethylene, chlorine, and water vapor is 1:1:4--5, respectively. [LD]

SUB CODE: 11, 07/ SUBM DATE: 06May63/

Card 1/1 UDC: 547:313.2'322.07

GROBOV, O. F., (Postgraduate Student, All-Union Experimental Institute of Veterinary Medicine)

Elk susceptbility to cattle anaplasmosis.

Veterinariya vol. 38, no. 9, September 1961 pp. 50

ABRAMOV, I.V., kand.veterinarnykh nauk; GROBOV, O.F.

Transmission of Anaplasma marginale Theiler 1910 by ticks. (MIRA 16:2)
Trudy VIEV 26:179-182 '62.

1. Laboratoriya protozoologii Vsesoyuznogo instituta eksperimental'noy veterinarii.
(Ticks as carriers of disease) (Anaplasmosis)

GROBOV, O.F., aspirant

Susceptibility of moose to cattle anaplasmosis. Veterinariia 38 no.9:50 S '61. (MIRA 16:8)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.

GROBOV, O.F., starshiy nauchnyy sotrudnik

Case of eperythrozoonosis in cattle. Veterinariia 41 no.4:53-55 Ap '64. (MIRA 17:8)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.

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124-58-9-10330

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AUTHOR: Grobov, V. A.

TITLE: Unsteady Vibrations of a Turbine Shaft in the Vicinity of the Critical Angular Speed (Nestatsionarnyye kolebaniya vala turbiny v oblasti kriticheskikh chisel oborotov)

PERIODICAL: LatvPSR Zinātnu Akad. vēstis, Izv. AN LatvSSR 1957 Nr 8, pp 161-172

ABSTRACT: An examination of the bending vibrations of a flexible shaft, equipped with a disk located unsymmetrically relative to the supports, during transition through the critical angular speed, wherein an unsteady change in angular speed is assumed. The gyroscopic moments of the disk are taken into account. Use is made of N. N. Bogolyubov's and I. A. Mitropol'skiy's method [Asimptoticheskiye metody v teorii nelineynykh kolebaniy (Asymptotic Methods in the Theory of Nonlinear Vibrations). Gostekhteorizdat, 1955]. In the integration complex displacements are introduced, and the straight-precession regimen is selected as the only possible result of the action of the unbalanced disk in the given conditions of absolute rigidity of the supports. 1. Shafts--Vibration. 2. Shafts--Ve[illegible]--Application

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Orlov, V.A.

18(7); 25(2) PHASE I BOOK EXPLOITATION SOV/2561

Akademiya nauk SSSR. Institut mashinovedeniya

Problemy prochnosti v mashinostroyenii, vyp. 1 (Problems of Strength in Machinery Construction, Nr. 1) Moscow, Izd-vo AN SSSR, 1958. 105 p. 3,000 copies printed.

Resp. Ed.: S.V. Serensen, Academician, Academy of Sciences, UkrSSR; Ed. of Publishing House: V.I. Mitin; Tech. Ed.: O.M. Gus'kova.

PURPOSE: This collection of articles is intended for scientific research workers and engineers concerned with problems of vibrations in revolving shafts.

COVERAGE: This collection of articles deals with vibrations in rotary motion. Topics discussed include the influence of internal friction on the vibrational stability of revolving shafts, nonlinear vibration of shafts beyond critical speeds, flexural unsteady-state vibrations of a flexible rotor with

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two equal unbalanced masses, and flexural unsteady-state vibrations of flexibly supported rotors, taking the gyroscopic effect into account. No personalities are mentioned. References follow several of the articles.

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